Remifentanil patient-controlled analgesia (PCA) for women in labour

This leaflet is for pregnant women who would like an alternative form of pain relief to an epidural. If you have any questions or concerns, please speak to your midwife or doctor.

Introduction

There are several ways of easing the pain of labour. These include:

- Relaxation techniques and breathing exercises.
- Entonox – a mixture of nitrous oxide and oxygen which you can breathe.
- TENS machine – small electrical impulses sent through pads on your back.
- Diamorphine injection into your bottom or leg.
- Epidurals.

Of these, epidurals are the most complicated. However, not everyone wants one and some women cannot have one due to medical reasons. This may be because they have had back surgery or because their blood is not clotting well enough.

This leaflet aims to explain an alternative treatment that we are able to offer you at the Royal Berkshire Hospital, which can give you more effective pain relief than the other ways listed above.

Remifentanil is a strong pain-relieving medicine that works in a similar way to diamorphine or pethidine. However, unlike these, it is very quickly broken down into something that has no effects on the body. Babies' bodies are also able to get rid of it. Remifentanil also works very quickly. It is always given directly into the blood, and so quickly travels to the brain to give pain relief. The advantage of this over diamorphine is that it should work more quickly but not build up in your body.

Although remifentanil can cause the same unwanted effects as diamorphine – sleepiness, sickness, itching and reduced breathing – they do not last very long, as your body will get rid of this medicine very quickly.

We use a special pump to give remifentanil during labour. This is called a PCA pump (or Patient-Controlled Analgesia pump). This is connected to a cannula (a drip) in your arm. You will be given a button to press, which tells the machine to give you a dose of the medicine. The machine will not give you another dose for two minutes, no matter how many times you press the button. It can take some time to learn how to time pressing the button with your contractions. We recommend pressing the button just before or at the start of your contraction.

Because it is possible that your breathing might slow down, we will keep a very close eye on you. We will measure your pulse, blood pressure, oxygen levels and will monitor your baby's heart rate with the CTG machine. You may need to be given a little oxygen to breathe.

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Not every woman who has used remifentanil PCA has found it effective. For some, the side effects of nausea and sleepiness are worse than the decrease in their pain. The advantage of this technique over diamorphine is that if you do not like it you can stop it and within 10 to 20 minutes you will not have any of the side effects. Diamorphine, however, lasts for several hours.

The anaesthetist on duty will come and talk to you when you are admitted. Please ask if you have any questions or worries. Whether you have the remifentanil PCA is your decision but we will give you as much information as we can to help you to make it.

As with many drugs, remifentanil is not licenced for use in pregnancy but is widely used internationally and is a well-recognised method of providing pain relief in labour.

References

1. Remifentanil for labor analgesia: an evidence-based narrative review. M. Van de Velde, B. Carvalho. International Journal of Obstetric Anesthesia (2016) 25, 66–74
2. Jones L, Othman M, Dowswell T, Alfirevic Z, Gates S, Newburn M, Jordan S, Lavender T, Neilson J. Pain management for women in labour: an overview of systematic reviews. Cochrane Database of Systematic Reviews 2012, Issue 3. Art. No.: CD009234. DOI: 10.1002/14651858.CD009234.pub2

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